

**IN THE CLAIMS:**

Please amend the claims as indicated below.

Claims 1-29 (withdrawn).

1 30. A method of fabricating a composite electrolyte for use in an electrochemical fuel  
2 cell, comprising:

- 3 (i) applying onto a surface of a substrate a viscous liquid composition of (a)  
4 an inorganic cation exchange material, (b) silica-based material, (c) a  
5 polymer-based material, and (d) a solvent-dispersant;
- 6 (ii) spreading the viscous liquid composition to form a uniform thickness layer  
7 on the substrate; and
- 8 (iii) allowing the solvent to evaporate from the viscous liquid composition to  
9 yield the composite electrolyte,  
10 wherein the inorganic cation exchange material comprises about 0.1 wt%  
11 to about 99 wt% of the composite electrolyte.

1 31. The method of claim 30, wherein the silica-based material comprises about 0.1  
2 wt% to about 70 wt%, and the polymer-based material comprises about 0.1 wt% to 99.9  
3 wt% of the composite electrolyte.

1 32. The method of claim 30 wherein step (ii) includes drawing the viscous liquid  
2 composition through a doctor blade assembly.

1 33. The method of claim 30 wherein step (iii) includes heating the viscous liquid  
2 composition.

1 34. The method of claim 30 wherein the inorganic cation exchange material  
2 comprises about 0.1 wt% to about 30 wt%, the silica-based material comprises about 0.1  
3 wt% to about 15 wt%, and the polymer-based material comprises about 40 wt% to 99  
4 wt% of the composite electrolyte.

1 35. (currently amended) The method of claim [19] 30 wherein the inorganic cation  
2 exchange material is selected from the group consisting of clay, zeolite, hydrous oxide,  
3 inorganic and salt.

1 36. The method of claim 35 wherein the clay includes an aluminosilicate-based  
2 exchange material selected from the group consisting of montmorillonite, kaolinite,  
3 vermiculite, smectite, hectorite, mica, bentonite, nontronite, beidellite, volkonskoite,  
4 saponite, magadite, kenyaite, zeolite, alumina, and rutile.

1 37. The method of claim 35, wherein the clay is modified to make it more compatible  
2 with organic matrices, a clay modification including exfoliation which helps to separate  
3 platelets of inorganic substance.

1 38. The method of claim 35, wherein the clay includes a modified montmorillonite  
2 consisting of montmorillonite treated with a modifier material selected from a group  
3 consisting of aminododecanoic acid, trimethyl stearate ammonium, octadecylamine, and  
4 methyl dihydroxy hydrogenated tallow ammonium.

1 39. The method of claim 30 wherein the polymer-based material has a linear,  
2 branched, or netted morphology.

1 40. The method of claim 30 wherein the polymer-based material includes one of  
2 acrylonitrile/butadiene/styrene rubber (ABS), styrene butadiene/acrylate/acetate polymer  
3 blends, epoxides, polypropylene, polycarbonate, polystyrene, polyethylene, polyaryl  
4 ethers, and polysulfones.

1 41. The method of claim 30 wherein the solvent-dispersant comprises water, N-  
2 methyl pyrrolidinone, dimethyl sulfoxide, dimethyl acidimide, and dimethylformamide.

1 42. The method of claim 30 wherein the inorganic cation exchange material, the  
2 silica-based material and the polymer-based material comprise 90 wt % or more of the  
3 solids content of the composite electrolyte.

1 43. The method of claim 30 wherein the composite electrolyte when measured in the  
2 substantially dried state consists essentially of the inorganic cation exchange material, the  
3 silica-based material and the polymer-based material.

1 44. (currently amended) The method of claim [19] 30 wherein the composite  
2 electrolyte has a proton conductivity of about 0.05 S/cm or higher.

Claims 45-50 (withdrawn).